TOTAL SYSTEM DEVELOPMENT
CONVERSION PHASE GUIDELINES

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1. GENERAL

1.01 The purpose of the Conversion Phase is to install and test or trial the new system in the operational environment. Once the system is fully installed, the old system is retired.

1.02 Whenever this section is reissued, the reason(s) for reissue will be included in this paragraph.

1.03 This section is a guideline and it provides expanded information in support of the concepts of Total System Development specified in Section 007-220-300*, Total System Development—Milestones.

1.04 Conversion planning begins very early in the system development cycle. By the end of Preliminary Design, the conversion strategy has been identified, along with the procedures (both manual and mechanized) required to accomplish the conversion. For very large systems, conversion development may even be viewed as a separate, parallel project effort.

1.05 Depending upon the type of conversion selected and the requirements for data and facilities conversion, some conversion activities may have to be initiated well in advance of actual system installation. Thus, conversion activities may be going on while the system is still in the Design or Implementation Phases. If such overlap is necessary, change management procedures must be invoked to assure the continued integrity of the system.

1.06 It is also possible for the Conversion Phase to overlap Performance Review and the start of system maintenance. This will occur if the conversion requires phased installation of the system in multiple locations. System maintenance begins after the successful completion of system certification testing (system trial) and the negotiation of the Completion Agreement. Therefore, remaining locations may be ***converted*** even after the system itself has been finalized and has moved into the maintenance stage.

2. DATA CONVERSION

2.01 For some systems, data bases and files must be available before the system becomes operational. Data conversion activities may include data capture, transcription, and/or verification and the generation of the data bases or files.

2.02 Data conversion procedures may be manual, mechanized, or both. Because of the criticality of data conversion, these procedures must be as carefully designed as other portions of the system in order to assure the integrity of the resultant data bases and files.

2.03 It may be possible to utilize existing procedures for data conversion. If not, new procedures must be developed, either as part of the system

*Check Divisional Index 007 for availability.

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or within the conversion subsystem. For new procedures, all the necessary deliverable documentation must be produced and tested, including run books, work module procedures, forms, training, etc.

3. HARDWARE, SOFTWARE, AND FACILITIES INSTALLATION

3.01 All hardware, software, and equipment must be installed and tested. This activity is usually performed jointly with vendor personnel; therefore, clear-cut responsibilities and conditions for acceptance should be defined between the various parties involved.

3.02 Any special work facilities must be prepared and evaluated including work stations, work units, environmental features (eg, lighting, sound suppression, temperature control, etc). Again, these installation functions may be shared with vendors, company engineers, or space planners, etc.

3.03 There may be significant lead time required for order, installation, and adequate test of these various types of physical facilities. Therefore, many of these activities may have to begin early especially if some or all of the facilities are required for system verification or validation testing.

4. WORK MODULE INSTALLATION

4.01 The installation or conversion of work modules, including supervisory modules, may involve a number of activities:

(a) Personnel selection and/or acquisition

(b) Organization structure changes

(c) Personnel orientation and training

(d) On-the-job practice with new procedures and documents.

4.02 Administrative personnel should become involved with the new system as early as possible to make the transition to the new procedures as smooth as possible. They should be knowledgeable enough to provide assistance to subordinates and to evaluate the performance of each work module within their areas of responsibility. They should be able to provide early detection of procedural, documentation, or training problems.

5. SYSTEM CERTIFICATION TESTING

5.01 Once the system is installed, the certification testing must be accomplished before the system can be completely turned over to operations personnel.

5.02 System certification is performed in order to assure that the operational system meets all stated performance specifications. Since system logic is evaluated during verification and validation phases of system testing during implementation, certification will focus on such characteristics as:

(a) Resource utilization

(b) Throughput and processing efficiency

(c) Processing schedules

(d) Response time

(e) System reliability and availability

(f) Backup and recovery in real environment

(g) Personnel performance

(h) System administration.

5.03 For any specification not met, the reason for and significance of the deviation must be determined. Resolution of the problem may require changes to system design, procedures, documents, training, or perhaps renegotiation of the service agreements.

5.04 Certification is concluded when the acceptance tasks performed by (or on behalf of) those who will use and operate the system demonstrate that the system does, or will within a specified time frame, meet the user's needs.

6. COMPLETION AGREEMENT

6.01 The completion agreement represents formal acceptance of the system by operating and user personnel.

6.02 If unresolved problems remain after certification testing, their disposition must be stated in the completion agreement. Disposition could be to:

(a) Correct immediately before system turnover

(b) Defer until maintenance stage

(c) Defer until first major system reissue.

6.03 If additional Conversion Phase activities must be performed, a schedule for these events should be included in the completion agreement.

7. OLD SYSTEM RETIREMENT

7.01 After the new system has become operational, the nonsalvageable portions of the conversion subsystem and old system must be phased out. The nonsalvageable portions include:

(a) Documentation, including performance aids

(b) Training materials

(c) Files (manual and mechanized)

(d) Forms

(e) Equipment.

8. END-OF-PHASE ACTIVITIES

8.01 There is usually no formal review at the end of the Conversion Phase. Operational Approval, System Administration, etc, signify system acceptance via the completion agreement.

9. REFERENCES

9.01 The following sections will provide additional information relevant to the Conversion Phase:

SECTION	TITLE
007-200-310	Functional Roles in a Systems Environment
007-208-310	Project Management
007-220-300*	Total System Development—Milestones
007-227-310	Developmental Documentation Specifications
007-233-300*	Testing Recommendations for Information Systems

*Check Divisional Index 007 for availability.